

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Improvements relating to Bracelet Clasps

We, MONTAL WATCH FITTINGS LIMITED, a British Company of Priors Road, Cheltenham, Gloucester, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns improvements in bracelet clasps of the type in which a connecting link is detachably engaged by a lateral sliding movement into a transverse opening at one end of the clasp, where it is retained by a cap hinged to the other end of the clasp.

According to the present invention the clasp incorporates spring means for exerting a resilient pressure against the side of the connecting link so as frictionally to hold the link in position and prevent its readily sliding out of the clasp opening when the cap is in a raised position.

The spring means may consist of a leaf spring extending longitudinally of the clasp, the leaf spring having a free end adjacent the clasp opening which is looped or otherwise bent laterally to act as a shoe for bearing on the side of the connecting link.

Two such leaf springs may be provided, the springs being formed by the limbs of a U-shaped spring strip having a flat base. In this case the shoes on the free ends of the two leaf springs may be directed inwardly towards one another.

The clasp may, according to another feature of the invention incorporate a longitudinal slide having at its outer end, adjacent the other end of the clasp, an attachment for one end of a bracelet, the slide being spring loaded to retract it into the clasp thereby affording an expansible clasp.

The slide may be formed with top and bottom walls joined by an end wall at its inner end, a coiled compression spring for retracting the slide being housed between the top and

bottom walls of the slide, and having its ends acting respectively against the slide end wall and an abutment on the clasp.

When the clasp incorporates a longitudinal slide and a spring strip forming the pair of leaf springs for exerting resilient pressure against the detachable connecting link, both as above described, the two springs may extend along the open sides of the slide with the base of the spring strip extending through the slide to form said abutment.

In this case the base of the spring strip may be held by the coiled compression spring against a hinge pin for the cap, the hinge pin likewise extending through the slide.

One embodiment of the present invention will now be described by way of example with reference to the accompanying drawings in which:—

Fig. 1 is a longitudinal cross-section of a bracelet clasp according to the invention with the retaining cap in its open position and,

Fig. 2 is a plan view of the bracelet clasp shown in Fig. 1, with the retaining cap closed.

Referring to the drawings, the clasp is formed with an elongated hollow body curved slightly in the normal way to follow the contour of the wrist, and it is of rectangular cross-section. At one end of the clasp, the left hand end in the drawings, the top and bottom walls 11, 12 of the body are curved towards each other, as at 13, but their ends are separated to afford a transverse end slot 14. The side wall 15 of the body adjacent to the slot 14 has an opening 16 in which is laterally slidable by a transverse movement a loop or eye 17 on a connecting link 18 for attachment to a bracelet. The end slot 14 receives the body of the link 18 between the loop or eye 17 and the link.

A hinge pin 19 for a cap 20 extends between the side walls of the body 10 at the other end of the body which is open. The cap

is of channelled section so that it embraces the clasp body when lowered as shown in Fig. 2. In this position the opening 16 for the connecting link is partially masked by a side wall of the cap, and the connecting link is thus retained against withdrawal from within the clasp body.

A longitudinal slide 22 is engaged in the clasp body through its open end. It is shaped from a single strip, with top and bottom walls 23, 24 which are in a sliding engagement with the top and bottom walls 11, 12 of the clasp body. The two slide walls 23, 24 are connected by an end wall 25 at the inner end of the slide. At the outer end of the slide the walls 23, 24 are closed together and shaped, beyond the hinge pin, with a loop 26 for receiving a connecting link on the other end of the bracelet, the hinge pin 19 extending through the slide between its top and bottom walls.

A coiled compression spring 28 extends within the slide between its inner end wall 25 and an abutment hereinafter described. The spring 28 acts to hold the slide resiliently retracted into the clasp body 10 so as to afford an expansible clasp.

Two leaf springs 30 extend longitudinally through the clasp body in gaps between its side walls 11 and 12 and the open sides of the slide 22. The springs 30 are formed by the limbs of a U-shaped spring strip having a flat base 31 that extends through the slide between the top and bottom walls of the slide, the base lying against the hinge pin 19 and forming the abutment for the compression spring 28. At their free ends, adjacent the clasp opening 16, the leaf springs are bent, looped or otherwise rolled round laterally inwardly towards one another to provide shoes 32 that resiliently bear against the side of the connecting link loop or eye 17, and they act to brake sliding movement of the connecting link, so as to take up any slackness in fit and thereby prevent the link from accidentally slipping out of the clasp body when the cap is raised.

The loop or eye 17 of the link may however be pushed into and slid out of the clasp body with the cap in the raised position.

To allow the leaf springs to deflect inwardly when the loop or eye 17 is slid in and out, the corners of the top and bottom wall of the slide adjacent the slide end wall are cut away as at 40, and the slide end wall is foreshortened laterally as shown in Fig. 2. This eases the insertion and removal of the loop or eye.

WHAT WE CLAIM IS:—

1. A bracelet clasp of the type described incorporating spring means for exerting a resilient pressure against the side of the connecting link so as frictionally to hold the link

in position and prevent its readily sliding out of the clasp opening when the cap is in a raised position.

2. A bracelet clasp as claimed in claim 1, wherein the spring means consists of a leaf spring extending longitudinally of the clasp, the leaf spring having a free end adjacent the clasp opening which is looped or otherwise bent laterally to act as a shoe for bearing on the side of the connecting link.

3. A bracelet clasp as claimed in claim 2, wherein two of said leaf springs are provided, the springs being formed by the limbs of a U-shaped spring strip having a flat base.

4. A bracelet clasp as claimed in claim 3, wherein the shoes on the free ends of the leaf springs are directed inwardly towards one another.

5. A bracelet clasp as claimed in any one of the preceding claims incorporating a longitudinal slide having at its outer end, adjacent the other end of the clasp, an attachment for one end of a bracelet, the slide being spring loaded to retract it into the clasp.

6. A bracelet clasp as claimed in claim 5, wherein the slide is formed with top and bottom walls joined by an end wall at its inner end, a coiled compression spring for retracting the slide being housed between the top and bottom walls of the slide and having its ends acting respectively against the slide end wall and an abutment on the clasp.

7. A bracelet clasp as claimed in claim 6, wherein the top and bottom walls of the slide are extended beyond said other end of the clasp where they are shaped to form said attachment.

8. A bracelet clasp as claimed in claim 3 or 4 and either one of claims 6 and 7, wherein the two leaf springs extend along the open sides of the slide with the base of the spring strip extending through the slide to form said abutment.

9. A bracelet clasp as claimed in claim 8, wherein the base of the spring strip is held by the coiled compression spring against a hinge pin for the cap, the hinge pin likewise extending through the slide.

10. A bracelet clasp of the type described incorporating a longitudinal slide substantially as hereinbefore described.

11. A bracelet clasp constructed and arranged substantially as hereinbefore described with reference to, and as shown in, the accompanying drawings.

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PROVISIONAL SPECIFICATION

Improvements relating to Bracelet Clasps

We, MONTAL WATCH FITTINGS LIMITED, a British Company of Priors Road, Cheltenham, Gloucester, do hereby declare this invention to be described in the following statement:—

This invention concerns improvements in bracelet clasps of the type in which a connecting link is detachably engaged by a lateral sliding movement into a transverse opening at one end of the clasp, where it is retained by a cap hinged to the other end of the clasp.

According to one feature of the present invention the clasp incorporates spring means for exerting a resilient pressure against the side of the connecting link so as frictionally to hold the link in position and prevent its readily sliding out of the clasp opening when the cap is in a raised position.

The spring means may consist of a leaf spring extending longitudinally of the clasp, with one end fixed to that end of the clasp fitted with the hinge pin, and the free other end of the spring being looped or otherwise bent laterally to act as a shoe for bearing on the side of the connecting link.

Two such leaf springs may be provided, bent approximately to U shape from a spring strip but with a flat base. The shoes on the free ends may then be directed towards each other.

According to another feature of the invention a clasp of the type described incorporates a longitudinal slide which is adapted to receive one end of a bracelet and is spring loaded to retract it in the clasp and thereby afford an expansible clasp.

The slide may be formed with top and bottom walls joined by an end wall at the inside of the clasp, a coil compression spring for retracting the slide being housed between the upper and lower walls, and having its ends acting respectively against the slide end wall and the hinge pin for the pivoted cap on the clasp.

The upper and lower walls of the slide may be extended outside the clasp and shaped to afford a loop for connection to a bracelet.

When the clasp incorporates in a manner already described a pair of leaf springs for exerting pressure against the detachable connecting link, the two springs may extend along the open sides of the slide with the transverse connecting portion of the springs extending through the slide between the cap hinge pin and the adjacent end of the coil spring.

One construction of clasp in accordance with

the present invention will now be described by way of example.

The clasp is formed with an elongated hollow body curved slightly in the normal way to follow the contour of the wrist, and it is of rectangular cross section. At one end of the clasp the top and bottom walls are curved towards each other, but their ends are separated to afford a transverse end slot. One of the side walls adjacent to this slot has an opening in which is slidable by a transverse movement a loop or eye on a connecting link for attachment to a bracelet. The end slot receives the body of the link.

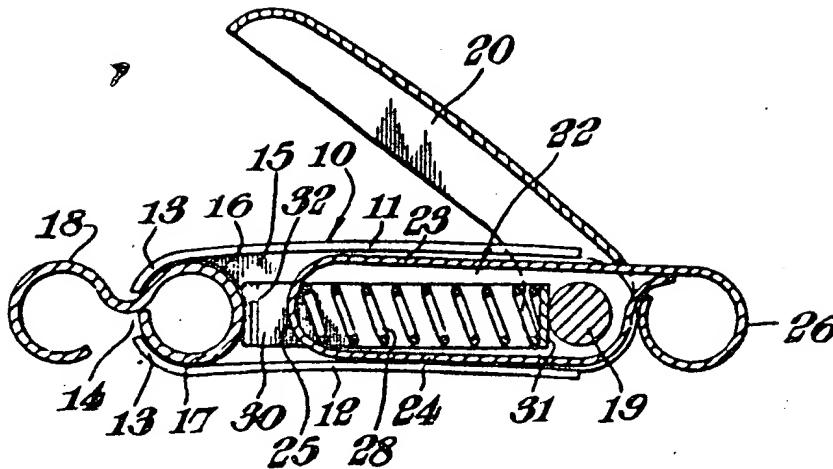
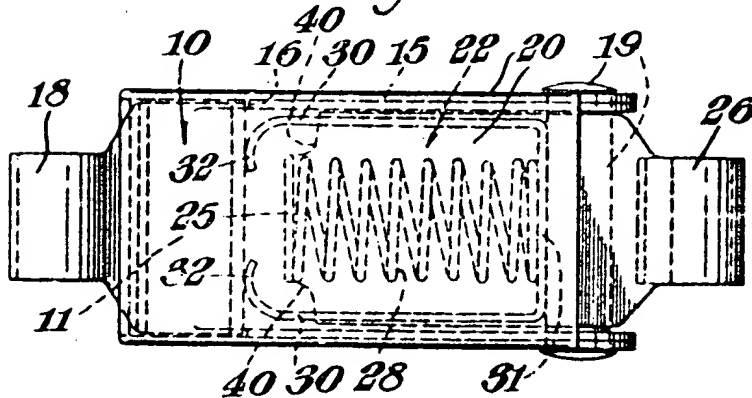
A hinge pin for a cap extends between the side walls at the other and open end of the clasp body. The cap is of channelled section so that it embraces the clasp body when lowered. In this position the hole for the connecting link is masked by a side wall of the cap, and the connecting link is thus retained against withdrawal.

A longitudinal slide is engaged in the clasp body through its open end. It is shaped, preferably from a single strip, with upper and lower walls which are in sliding engagement with the top and bottom walls of the clasp body. The two slide walls are connected by an end wall at the inside of the clasp. At their outer ends the walls of the slide are closed together and shaped beyond the hinge pin with a loop for receiving an end of the bracelet or a connecting link.

A coil compression spring extends within the slide between its inner end wall and the hinge pin. It acts to hold the slide resiliently retracted so as to afford an expansible clasp.

Two leaf springs extend longitudinally through the clasp in gaps between its side walls and the open sides of the slide. Their inner ends are connected by cross piece that extends through the slide between the hinge pin and the adjacent end of the compression spring. At their outer ends the leaf springs are rolled round towards each other to provide shoes that resiliently bear against the side of the detachable connecting link, and they act to brake sliding movement of the link, so as to take up any slackness in the hole and thereby prevent the link from accidentally slipping out of position when the cap is raised.

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Fig. 1.*Fig. 2.*

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